

Build Interest in a Specific Discipline - Engineering and Engineering Technology

FIRST Robotics Collaborative with Newark Public Schools

New Jersey Institute of Technology
NJ Higher Education Sector: Public Research University
Year Began: 2002 Participants Served: 260 students and teachers

CONTACT INFORMATION

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Partners: NJ/NYC Regional FIRST, Newark Public Schools, New Jersey Commission on Higher Education

DESCRIPTION

New Jersey Institute of Technology has partnered with NJ/NYC FIRST Regional Office and Newark Public Schools to encourage and prepare Newark students, in grades 6-12, to pursue further studies and careers in scientific and technical fields. The objective is to enhance science, technology, engineering, and mathematics classroom instruction and student performance through the preparation for the US For Inspiration and Recognition in Science and Technology (FIRST) LEGO League Tournament and FIRST Robotics Competition. This is a national pre-engineering partnership. The program provides robotics technical assistance through site visits to Newark Public School’s middle school teams; facilitates Saturday Help Clinics, staffs a Virtual Help Desk and local tournament conducted on campus; and referees at the district’s local tournament at NJIT

Project Lead The Way

New Jersey Institute of Technology
NJ Higher Education Sector: Public Research University
Year Began: 2002 Participants Served: 900-1,200 students and teachers

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Partners: National Office of PLTW, NJ Commission on Higher Education, School Districts & Schools

DESCRIPTION

Project Lead The Way® (PLTW) is a national pre-engineering partnership. The program goal is to increase the academic preparation of secondary students interested in engineering and engineering technology at the post secondary level. NJIT serves as the NJ Affiliate by providing information, professional development and support to perspective and participating schools throughout the state.

Middle school students are introduced to technology through the application of the engineering design process. High school students select year-long courses designed to strengthen problem-solving, communication and team building skills; apply the engineering design process; broaden scientific methodology; understand technological systems; and demonstrate mathematics principles.

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Ceramic and Materials Engineering I

Rutgers, The State University of New Jersey
NJ Higher Education Sector: Public Research University
Year Began: 2002 Participants Served: 30-40 per year

CONTACT INFORMATION

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DESCRIPTION

In 2003, with a grant from the NJ Commission on Higher Education, the Department of Ceramic and Materials Engineering began an aggressive outreach program to educate and raise student's interest level in science and engineering, especially in nanotechnology. Nanotechnology is a relatively new field with much potential for benefiting society. The overall program includes professional development sessions for teachers and an internship program for students.

The Department of Ceramic and Materials Engineering hosts 12-15 talented high school students for 7-8 weeks to participate in an annual internship program. During this time, students are assigned a project and work directly with School of Engineering faculty and graduate students.

Program for Acceleration in Careers in Engineering (PACE)

Rutgers, The State University of New Jersey - School of Engineering
NJ Higher Education Sector: Public Research University
Year Began: 1982 Participants Served: 50

CONTACT INFORMATION

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Partners: Statewide NJ Public & Private Schools, Engineering students from Rutgers University School of Engineering, Lucent Technologies

DESCRIPTION

PACE (Program for Acceleration in Careers in Engineering) is an innovative science and engineering awareness program for African American high school students. The goal of PACE is to help prepare students for technical careers. Emphasis is placed on mathematics instruction, engineering orientation, college preparatory skills, and cultural awareness. PACE YDC-CJ is in session from 9 am - 1 pm each Saturday morning during the school year at the campus of Rutgers University, located in Piscataway, NJ.
